A MANUAL

OF

DIET AND REGIMEN

FOR

PHYSICIAN AND PATIENT.

BY

HORACE DOBELL, M.D.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS; FELLOW OF THE ROYAL MED. CHIR. SOC.; ETC.

PHYSICIAN TO THE ROYAL INFIRMARY FOR DISEASES OF THE CHEST.

1864

(SECOND EDITION.)

J. CHURCHILL AND SONS,

NEW BURLINGTON STREET.

LONDON:
PRINTED BY WERTHEIMER AND CO.,
CIRCUS PLACE, FINSBURY CIRCUS.

ADVERTISEMENT TO THE SECOND EDITION.

An edition of 1,000 copies, sold in about three months, is, I hope, an evidence that my Manual is, to some extent, answering the purpose with which it was written, by supplying a long-felt want of my professional brethren. I regret that its reviewers have not at present offered any criticisms upon the scientific details of my work from which I can gather hints for its improvement; but, in answer to my request in the preface, many medical men have kindly sent me suggestions, of which I have not failed to take advantage in preparing this new edition for the press, and I beg to return my best thanks for their co-operation in my attempt to facilitate a systematic attention to diet and regimen.

The principal alterations in this edition will be found to consist in changes of place in the arrangement of the matter and in the addition of some explanatory passages in connection with the Tables.

I cannot lose this opportunity of repeating my request, that any one who has tried the Manual in its present form will favour me with his suggestions for its improvement.

H. D.

June, 1864.

PREFACE.

This Manual has been constructed to supply a want felt by most medical men engaged in the practice of their profession. I do not feel it necessary, therefore, to offer any apology for its appearance. But, although I have done my best to make it as well suited as possible to the purposes for which it is designed, I cannot help feeling, that, as it is the first of its kind, nearly every medical man may find in it some point in which he thinks it might be improved. This is, to a certain extent, unavoidable in anything prepared by one man for the use of many; and, fully aware of the difficulty, I have endeavoured to provide against it, by arranging the matter in such a form that any part can be easily erased, and by leaving spaces in which additions can be written under each subject. I hope, however, that any one who has fairly tried the Manual in its present form, will send me his suggestions for the improvement of any future editions that may be called for. The present state of opinion on the question of food, particularly increases the difficulty of presenting rules for diet, which, in their scientific explanations, shall satisfy the supporters of different theories. But I have not allowed this to deter me from publishing; because I feel, that, as every physician and surgeon, in private or public practice, is obliged, every day of his life, to give his patients instructions in diet and regimen; and as the results of scientific investigations may every year make some changes in our opinions on these as on other subjects,

it is useless to wait for some imaginary day when they shall be free from debateable questions, and far better to issue, from time to time, the best representative we can of the soundest views of the day, and to make such revisions from year to year as the advance of knowledge may require.

I am anxious, however, to state, that it has been my particular aim to avoid theories, as far as possible, and to take the results of the wide experience of a number of careful observers, as the basis of all important directions, whether of diet or of regimen, so that any defects which may afterwards be discovered in the scientific explanations may have as little effect as possible in vitiating the practical results.

My friend, Mr. Farrants, the accomplished President of the Microscopical Society, has given me such important assistance in the extensive series of examinations and calculations, which have been requisite as a basis for the dietetic portion of this Manual, that his name ought to have appeared on the title-page; and, although he has declined to appear in that place, I cannot afford to lose the advantage of his name as a guarantee for the rigid accuracy of all statements depending upon statistics and arithmetical precision. I wish, therefore, plainly to state, that Mr. Farrants has done for me a vast amount of work, which I had neither the time nor the talent to do half so well.

Although these labours have most of them been undertaken at my suggestion, and have been participated in by me, so that I am prepared to take the responsibility incurred by any statements I have made, Mr. Farrants came to the work with an accumulation of knowledge and

experience on the subjects, acquired by many years of application, and he must be considered as the chief workman in all that relates to the composition of food.

41, Harley Street, W.

The composition of the articles of food given at p. 32 will not be found to agree exactly with any published analyses.

The object has been to obtain not only the best analysis of a single specimen of each article but the mean of the best analyses of several specimens. Therefore, before arriving at the conclusion stated, several of the best analyses of the substance by different eminent chemists have been compared: the relative amount of each proximate principle has been separately ascertained, taking the mean of the different determinations of it: and the combination of the means so ascertained has been adopted, as giving the fairest attainable approximation to the true composition of the article in question.

Analyses by the eminent chemists whose names are subjoined, have been used; 38 analyses of the cereal grains have been examined, 14 of the leguminous seeds, 36 of the esculent roots, 60 of food obtained from animals; on the whole, 186 separate analyses have been examined for the purpose of fixing, as nearly as practicable, the approximate mean composition of the articles given in the list.

The Alcohol Table (p. 24) is the result of an examination of several specimens of each alcoholic liquor, instituted to determine, as accurately as possible, the *weight* of absolute alcohol and of solid constituents in a *measured* quantity of liquid.

The quantities and proportions of the several alimentary elements adopted in the construction of the Diet Tables are the result of a most careful examination of the composition of all available diets known to have maintained health and strength in large numbers of adults. They have also been tested by personal and other experiments.

LIST OF ANALYSTS.

Berard.	Bromeis.	Girardin.	John.	Pasquier.	Schlossberger.
Berzelius.	Chevallier.	Gobley.	Johnston.	Payen.	Schrader.
Bibra.	Chevreuil.	Gorham.	Lampadius.	Peligot.	Schutz.
Bizio.	Christison.	Haidlen.	Lehman.	Playfair.	Sinclair.
Bostock.	Crome.	Henri.	Liebig.	Pogiole.	Sprengel.
Bouillay.	Davy.	Herapath.	Michaelis.	Polek.	Trommsdorf.
Boussingault.	Dumas.	Herberger.	Mulder.	Prout.	Vauquelin.
Braconnot.	Einhoff.	Hermstadt.	Norton.	Reinsch.	Way.
Brande.	Frank.	Horsford.	Ogston.		

CONTENTS.

DIRECTIONS FOR USING THE MANUAL.

1. The large type is for the Patient, who must follow every rule not marked "No," and is at liberty to take any article of food, or to adopt any mode of dressing food or any condition of food not marked "No."

2. The small type is for a remembrancer to the Medical man.

3. The Hygienic rules are adapted to the promotion and maintenance of vigorous health in adults living in the climate of the United Kingdom, and not suffering from any special diseases. (See pages 11-20).

4. Each diet table contains all the essential elements of nutrition, in forms, quantities, and proportions necessary to the maintenance of health in an adult living in the climate of the United Kingdom. (See Diet Tables, pages 27-31). The tables have been made complete without alcohol, leaving this to be ordered or not by the medical man, according to his views upon the subject. But, if spirituous liquors are added to any diet table, the quantity of carbon which they contain must be borne in mind. (See Alcohol Table, p. 24).

5. The Manual is to be marked according to the following rules, and then given to the patient as his daily guide,

and he should always produce it for revision when he sees his medical man.

a. Make the marks in pencil, so that they can be rubbed out and altered from time to time.

b. In the space left under each heading, write any special directions not contained in the text.

c. Write "No" against any rule not to be followed, or any diet-table, article of food, or mode of dressing food, which is forbidden.

d. Write "YES ESPECIALLY" against any rule, article of food, diet table, or mode of dressing food especially recommended.

e. In ordering spirituous liquors, turn to the Alcohol Table, p. 24, and state on the line at the top of the page, the quantity of absolute alcohol to be taken in each 24 hours, and write "YES ESPECIALLY" against the liquor especially selected as its source, and "No" against any which is forbidden. (See *ante* DIRECTIONS, 3).

NOTE.—For Hospital Practice, a number of Manuals should be kept ready-marked, in such a manner as to suit different classes of cases; as, for example, Fatty Degeneration, Diabetes, Tuberculosis, Gout, Obesity, the various forms of Dyspepsia, and the like. A single copy for each class might be marked by the Physician or Surgeon, and the rest done by a pupil or clerk.

RULES FOR PROMOTING AND MAINTAINING VIGOROUS HEALTH*

IN ADULTS LIVING IN THE CLIMATE OF THE UNITED KINGDOM.

VENTILATION AND HEATING.

1. No sitting or sleeping room should be left long without a fire, and every room in which persons live, either by day or by night, should have some opening by which it communicates freely with the outer air; but this should be so arranged that no draught can fall upon the persons in the room.†

2. If several rooms are occupied by turns during the twenty-four hours, the temperature of any one should not differ greatly from that of the rest.

3. No draught should blow upon a bed, and during sleep the whole body should have one covering at least of woollen material; for, while it is very important to keep the air of sleeping rooms fresh, it must be remembered that the body is more susceptible to chills during sleep than waking, and that changes in the temperature of the outer air are especially apt to occur during the night, and are, therefore, in danger of producing chills before they are observed. (See Sleep, p. 13, Rule 11).

---

* These Rules will require to be modified by the medical man to suit special cases.

† These conditions may be secured by "The Open Window Draughtless Ventilator," which is applied at a small cost by Mr. White, Builder, 58, St. Paul's Street North, New North Road, N.

CLOTHING.

4. In winter, the body and limbs, from the root of the neck to the toes and elbows, should be covered, next the skin, with some woollen material, such as lamb's wool or flannel.*

5. In summer, the material may be lighter, as merino, and need not cover the limbs.

6. The same woollen dress should not be worn both night and day, but should be changed for a woollen sleeping *vest* of the same material as that worn during the day. (See Sleep, p. 13, Rule 11).

7. Having provided that the skin is so covered that it is protected against sudden changes of temperature, all other clothing should be limited to that which is sufficient to preserve a comfortable feeling of warmth under the different changes of the season and of the weather.

8. Over-clothing, *i.e.*, such as keeps the body perspiring while at rest, or produces perspiration under very slight exertion, should be avoided, especially over-clothing of any one part of the body by which it is kept hotter than the rest.

9. It is of the greatest importance to keep the feet dry and as warm as the rest of the body. If the weather is damp, this can only be done by wearing goloshes when out of doors. (See Bathing, p. 16, rule 23).

---

* A very convenient combination of Vest and Drawers in one, for ladies and children, is sold by Hudson, Ludgate Hill, under the name of "The Union Dress."

SLEEP.

10. During ordinary health, the hours spent in actual sleep should not exceed eight; and if the sleep is sound, continuous, and refreshing, six will be sufficient for many persons. (See Rest and Change, p. 18, Rule 28).

11. During sleep, it is equally important to keep the body pleasantly warm, and to avoid keeping it overheated; and, as serious changes in the weather may happen in the night, and the lowest temperature in the twenty-four hours naturally occurs between 2 o'clock and 6 o'clock a.m., the ventilation and clothing must be prepared for these contingencies. (See Ventilation, p. 11, Rule 3; and Clothing, p. 12, Rule 6).

12. If sleep is taken after meals, it should not exceed half an hour in duration; it should be taken sitting back in an easy chair, with the head supported behind, not lying down and not sitting with the chin resting on the breast; the feet should be kept warm, and the dress loose round the neck and waist.

EXERCISE.

13. During ordinary health, some part of every day ought to be spent out of doors; and in ill-health it is of great importance not to discontinue the observance of this rule without good reason; for, although *in certain states of disease it may be very important to remain in doors,* it must not be forgotten that proper clothing, goloshes, respirators, and umbrellas, may make it not only safe but advantageous to go out of doors for exercise, when, without them, it would be very injurious. (See Posture, p. 15, Rules 17, 18).

14. Out-of-door exercise should be as active as the strength will allow, and should always be continued up to the point of slight—but not over—fatigue. This will be the best measure of the proper amount for both the weak and the strong.

15. Unless the air is pure, and the person strong, exercise before breakfast is more likely to do harm than good; a tumbler of milk and a biscuit, however, will be a sufficient meal to take before the walk or ride—a more substantial breakfast being taken afterwards. (See Meals, page 19, Rule 34).

16. Especial care is needed not to expose the body to chills when heated by exercise; and cold drinks should not be taken at that time, unless the exercise is about to be continued immediately, and even then the quantity of cold drink taken at once should be very small. (See Meals, pages 19-26, Rule 37).

POSTURE.

17. It is of great importance to acquire a habit of drawing the breath deeply and slowly, so as freely to expand the lungs during ordinary breathing. This requires that the head and shoulders be thrown well back in walking, sitting, and standing, and that no clothing be worn tight round the ribs. Those engaged in sedentary or stooping occupations should especially attend to this advice.

18. Those whose occupation obliges them to maintain the erect posture for a number of hours each day, should take every opportunity of lying flat down, even if only for a few minutes at a time. They should also bear in mind that standing will not take the place of walking exercise. (See Exercise, p. 14, Rule 13).

19. All persons whose pursuits require the long continuance or frequent assumption of any particular position or movement of the body or limbs, should take every opportunity of changing it for an opposite position or movement. (See Rest and Change p. 18, Rule 29 ; and Sleep, p. 13, Rule 12).

BATHING.

20. Warm baths, Turkish baths, vapour baths, shower baths, and cold plunges, should only be used under special medical orders.

21. During ordinary health, the skin of the body and limbs should be smartly rubbed once in twenty-four hours, first with a rough towel, wet with cold water, and then with a dry one till in a glow. The bather should stand on a dry rug while using this "*cold friction bath*," and it should not last more than one or two minutes, including both the wet and the dry rub.* Salt may be advantageously added to the water ;† and the bath may be used either on rising or going to bed, according to the feelings and convenience of each individual.

22. If the weather is very cold or the person delicate and chilly, the upper half of the body should be uncovered and rubbed first, and then a woollen vest should be put on, and the lower half uncovered and rubbed.

23. It is well to accustom the feet to being washed in cold water, but it must be done cautiously at first, and they should never be kept in the water more than a few seconds.

24. It is obvious, that there are times when cold bathing of all kinds must be temporarily discontinued.

---

* A piece of rough huckaback, 18 inches square, answers best for the wet rub, and the bath-sheet, cut in half, sold by Davies, 121, High Holborn, is best for the dry rub.

† Sea-salt, for this purpose, is prepared by Messrs. Tidman, and sold by all chemists.

REGULATION OF THE BOWELS.

25. As a general rule, the bowels ought to act, at some stated time, once in the twenty-four hours; and it is best to accustom them to act in the morning, after breakfast.

26. If they do not act spontaneously, they should be assisted by some article of diet which is found to affect them, or by some harmless aperient medicine, which must be prescribed by a medical man to suit the particular case, as the best aperient for one person may be the worst for another.

27. Provided that an aperient medicine is suited to the case, contains no drug injurious to the general health, and is not taken oftener than every second night, there is no harm in taking it at bed-time, whenever the bowels have not acted satisfactorily during the day.

REST AND CHANGE.

28. Active life is essential to the health of body and mind; but both require periods of rest, in addition to the regular hours of sleep. It is much better, therefore, to work vigorously for a time and then to rest, than to keep up a monotonous round of lifeless drudgery. (See Sleep, p. 13, Rule 10; and Exercise, p. 14).

29. The "current of the thoughts" is to the mind what posture is to the body; and both require change to prevent weariness and deformity. (See Posture, p. 15, Rule 19).

30. Rest of body or mind may be obtained either by abstaining from all bodily or mental exercise, or by change of occupation, and as the one gives entire rest and the other only partial rest, it is best to adopt each of these measures at different times.

31. It must be remembered, that, as the mind acts by means of the brain, which is a part of the body, it cannot act healthfully while the body is exhausted.

MEALS.

32. Counting from the time of beginning one meal to that of beginning the next, food should be taken at regular intervals of from four to five hours, except the interval between dinner and a very slight tea, which may be reduced to two or three hours. In weakly persons, and when the appetite will allow only a very small meal to be taken at one time, the intervals between all the meals may be reduced to from three to four hours. In illness, the interval must be ordered day by day by the medical man.

33. The chief meal of the day—the full-meal—by whatever name it is called, should be taken at whatever hour active occupation, both bodily and mental, can be suspended for about two hours; provided always that not less than three hours elapse between the full meal and bed-time.

34. Breakfast should be the second best meal of the day, and should be taken leisurely immediately after rising in the morning. (See Exercise, p. 14, Rule 15).

35. The other meals should be taken punctually at the fixed hours, but should be only light refreshments, and small in bulk.

36. No food should be taken in the intervals between the regular meals.

37. As a general rule, pure water may be taken at any time, if indicated by thirst, so that the body is not heated

by exercise, and the quantity drunk at once does not exceed a quarter of a pint. (See Exercise, p. 14, Rule 16).

38. Spirituous liquors should not be taken the first thing in the morning or the last thing at night, without medical orders, and they should not be drunk stronger than in the proportion of one ounce avoirdupois of absolute alcohol in about ten fluid ounces of liquid. (See Alcohol Table, p. 24).

39. Alcohol Fasts.—Those who habitually take alcohol daily, should abstain from it entirely for a few days twice or thrice a year.

LIST OF VARIOUS ARTICLES OF ANIMAL FOOD.

The Patient is at liberty to take whatever is not marked "No."

Fish and Shell-fish.	Meats.	Poultry and Game.
Brill	Beef	Chicken
Cod	Bacon	Duck
Herring	Ham	Fowl
Haddock	Lamb	Goose
Mackerel	Liver	Guinea Fowl
Pike	Mutton	Pigeon
Plaice	Pork	
Prawn	Sweet-bread	Grouse
Salmon	Tongue	Hare
Shrimp	Veal	Partridge
Skate		Pheasant
Sole		Rabbit
Trout and other small fresh-water Fish		Venison
Turbot		Woodcock
Crab		
Cray Fish		
Lobster		
Oyster		

CONDITIONS IN WHICH ANIMAL FOOD MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Dried . . Fresh. . Pickled Salted . .

MODES OF DRESSING ANIMAL FOOD.

The Patient is at liberty to adopt whatever is not marked "No."

Baked. Boiled . Broiled. Curried
Fried . Hashed . Minced. Roast . Stewed.

POTASH-VEGETABLES AND FRUITS.

The Patient is at liberty to take whatever is not marked "No."

VEGETABLES.	FRUITS.
Asparagus .	*Apples. . . .
*Broad Beans .	Almonds . . .
Brocoli . . .	*Chestnuts . .
*Carrot . . .	*Cherries . . .
Cabbage . . .	Currants . . .
Celery . . .	*Dates . . . .
Cauliflower . .	*Figs . . . .
Cress	Grapes . . .
Cucumber . .	Gooseberries .
Endive . . .	Lemons . . .
French Beans .	*Nuts & Filberts
Lettuce . . .	*Oranges . . .
Mustard (green)	Pears . . . .
Mushrooms . .	*Pine Apples. .
Onions . . .	*Plums. . . .
*Parsnip . . .	*Prunes . . .
Peas (green). .	*Raisins . . .
*Potato . . .	Raspberries . .
Radish . . .	Strawberries .
Rhubarb . . .	*Walnuts . . .
Spinach . . .	
Turnip . . .	
Tops .	
Watercress . .	

☞ Those marked * contain a large quantity of Saccharine matter or of Starch.

CONDITIONS IN WHICH VEGETABLES MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Cooked . . Pickled . . Raw . .

CONDITIONS IN WHICH FRUITS MAY BE TAKEN.

The Patient is at liberty to adopt whatever is not marked "No."

Cooked . . Dried . . Preserved . . Raw .

SWEETS.

The Patient is at liberty to take whatever is not marked "No."

When a special recipe is not given, see Miss Acton's Cookery.

PASTRY.		Puddings without Crust.	Confectionery and other Sweets.
Pies or Tarts.	Puddings with Crust.		
Containing	Containing	Consisting of	
Fruits, dry.	Fruits, dry.	Arrowroot.	Custard, boiled.
„ fresh.	„ fresh.	Batter, boiled.	„ baked.
Jam.	Jam.	„ baked.	Ice (Water).
		Bread.	„ (Cream).
		Bread & Butter.	Jelly, Calfsfoot.
		Flour (see recipe)	„ Gelatine, or Isinglass.
		Macaroni.	Sweet Cakes.
		Rice (see recipe)	
		Sago or other farinaceæ.	
		Suet (see recipe)	
		Tapioca.	
		Vermicelli.	

MISCELLANEOUS ARTICLES OF DIET.

When a special recipe is not given, see Miss Acton's Cookery.

The Patient is at liberty to take whatever is not marked "No."

*Barley Water.
*Bread, aërated.
„ bakers.
Blatchley's Diabetic Biscuits.
Butter.
Broth, chicken.
„ mutton (see recipe).
„ veal.
Cheese.
Cream.
Cream cheese.
Coffee, Chocolate, Cocoa } see recipe.
Curds.
Eggs.
*Gruel, oatmeal.
„ groat.
Milk.
Milk with Brandy, „ „ Rum, „ „ Whisky, „ „ Suet } see recipe.
*Pea-flour.
*Pie-crust.
*Porridge (see recipe).
*Port Wine Jelly (see recipe).
Soup, gravy.
„ invalid (see recipe).
„ mock turtle.
„ ox tail.
„ turtle.
Suet.
*Sugar.
Tea, beef (see recipe).
„ black.
„ green.
„ linseed.
Water.

☞ Those marked * contain a large quantity of Saccharine matter or of Starch.

ALCOHOL TABLE.

Take in 24 hours_____ ozs. avoirdupois of Absolute Alcohol.***

On the above line is to be stated the quantity by weight of absolute Alcohol to be taken in 24 hours, and in the Table below "YES ESPECIALLY" is to be written against the Liquor especially selected as its source, and "NO" against any that is forbidden.

The *weight* of Absolute Alcohol (spec. grav. ·796 at 68° Fht.), and of Solid dissolved, in *measured* quantities of Spirituous Liquors.

	SPIRITUOUS LIQUORS. (For ACID and SUGAR, see p. 25).	*** This column shows the quantity by measure of each Spirituous Liquor which contains **1 oz. avoird.** of absolute Alcohol.	1 oz. avoir. of Carbon is contained in fluid ozs.	One Imperial Pint contains: Alcohol — ozs. avoird.	Extract. — ozs. avoird.	Carbon. — ozs. avoird.	Quantity per cent.: Alcohol — Measure.	Extract. — Weight.
		Fld.oz.						
ARDENT SPIRITS	Proof Spirit	2·26	4·3	8·8	—	4·6	56·0	—
	Whisky	2·6	5·0	7·6	·1	4·0	48·3	·6
	Brandy	2·7	5·0	7·4	·2	4·0	47·1	1·2
	Rum	2·8	5·3	7·1	·2	3·8	45·0	1·1
	Arrack	3·0	5·8	6·6	·1	3·4	41·4	·4
	Gin	3·2	5·5	6·3	·9	3·6	39·8	4·5
WINES	Roussillon	6·4	8·6	3·1	1·7	2·3	19·6	8·0
	Sherry	6·6	10·2	3·0	1·0	2·0	19·2	4·6
	Cape Madeira	6·8	11·9	2·9	·7	1·8	18·6	3·5
	South African Port	6·8	10·0	2·9	1·1	2·0	18·6	5·6
	Port	6·9	10·2	2·9	1·1	2·0	18·5	5·5
	Bucellas	7·3	11·2	2·7	·9	1·8	17·2	4·4
	Marsala	7·5	11·7	2·6	·9	1·7	16·9	4·4
	East India Madeira	7·6	11·3	2·6	1·0	1·7	16·5	4·8
	Frontignac	9·0	7·8	2·2	3·5	2·6	14·0	16·1
	Champagne	12·6	11·3	1·6	2·3	1·8	10·4	11·9
	Hock	13·4	20·4	1·5	·5	1·0	9·5	2·5
	Hungarian *Red* Vöslau	14·1	21·2	1·4	·5	·9	8·9	2·5
	Burgundy	15·2	23·8	1·3	·4	·8	8·3	1·8
	Moselle	15·2	23·3	1·3	·4	·8	8·3	2·0
	Claret	16·3	23·4	1·2	·5	·8	8·0	2·5
	Sauterne	19·0	27·2	1·0	·5	·7	6·6	2·3
	Hungarian *White* Neszmely	19·0	28·8	1·0	·4	·7	6·6	1·8
CIDER		64·0	40·0	·5	·8	·6	3·0	3·7
MALT LIQUORS	Ale, Burton, Bass, ◇1 84/	12·5	9·0	1·6	3·4	2·2	10·1	15·7
	„ „ „ ◇3 60/	14·2	13·0	1·4	2·0	1·5	8·9	9·6
	„ Pale „ △ 60/	19·0	17·5	1·0	1·5	1·1	6·6	7·0
	„ India (Gardner, × 54/)	23·0	28·0	·9	·6	·7	5·5	3·0
	„ Bottled { Scotch (Edinburgh)	19·0	13·1	1·0	2·4	1·5	6·6	11·4
	„ Bottled { Pale	25·0	20·5	·8	1·4	1·0	5·0	6·6
	„ "Eightpenny"	22·7	22·2	·9	1·1	·9	5·7	5·4
	„ Family, 1/ gallon	24·9	22·0	·8	1·2	·9	5·4	5·7
	„ "Fourpenny"	25·4	23·0	·8	1·1	·8	5·2	5·3
	Stout, Dublin (bottled)	20·8	16·7	·9	1·7	1·2	6·1	8·2
	„ London	21·5	18·9	·9	1·5	1·1	5·9	6·9
	Porter, London	35·6	26·6	·6	1·2	·8	3·7	5·6

If a spirituous liquor contains more than one ounce of absolute Alcohol in about ten fluid ounces of Liquid, it should be reduced to this strength before it is drunk, by the addition of water or some other non-spirituous fluid.

N.B.—Fluid-ounce measures can be obtained at all chemists' shops.

ACID AND SUGAR IN SPIRITUOUS LIQUORS.

From Editor's Appendix to "The Chemistry of Wine," by G. J. Mülder. Edited by H. Bence Jones, M.D., F.R.S., pp. 381-3.

ACID.

"Proceeding from the least acid wine to the most acid we have Sherry, Port, Champagne, Claret, Madeira, Burgundy, Rhine wine, Moselle. The least acid fluids examined were Geneva and Whisky; then Rum, Brandy, Ale, Porter, Stout; the wines were all more acid than the malt-liquids."

"The nature of the acid was not absolutely determined, but a volatile acid distils over from wine, which is not acetic acid; and the action of polarised light shows that tartaric acid is seldom present, hence the fixed acid is most probably racemic, and perhaps malic acid."

SUGAR.

"I found no Sherry, Port, Madeira, or Champagne that did not contain more or less uncrystallisable sugar; (two samples of Sherry excepted, which were free from sugar.) I met with no Claret, Burgundy, Rhine, or Moselle wine, (excepting only one sample of Sauterne,) which was not free from every kind of sugar. Usually spirits contain no sugar; but one specimen of genuine French brandy had some cane-sugar added to it. All kinds of Ale, Porter, and Stout contain much glucose [grape-sugar]. Hard cider, I found also to be perfectly free from sugar. Sweet cider contained uncrystallisable sugar."

* * * * * * *

"The fluids examined may be arranged in the following order, commencing with those which contain no sugar, and ending with the most saccharine:

"Geneva, Rum, Whisky, Claret, Burgundy, Rhine, Moselle. These have no sugar. Brandy, Sherry, Madeira, Champagne, Port, Cider, Porter, Stout, Malmsey, Ale, Tokay, Samos, Paxarete, Cyprus."

ESSENTIALS OF A NORMAL DIET.

(See note, p. 5).

A healthy adult man of average stature, taking moderate exercise, will require and can consume, daily, from 32 to 40 ounces avoirdupois of dry nutritious food, which should have the following characters:—

1. About $\frac{1}{200}$ must be mineral matter.

2. From $\frac{2}{5}$ to $\frac{1}{2}$ may be water, leaving $\frac{3}{5}$ or not less than $\frac{1}{2}$ or from 15 to 20 ozs. of anhydrous solid alimentary material.

3. Three or four ounces of plastic matter must be combined with three or four times that quantity of respiratory material.

4. The Respiratory constituents must contain a mixture of fat with saccharine materials (hydro-carbons with carbo-hydrates) in the proportion of about 1 of the former to 3 of the latter.

These respiratory constituents should supply from 6 to 10 ounces of carbon, the exact amount required varying with season, exercise, etc.*

5. The Articles of Food must be sufficiently varied to meet the requirements of the taste and of the appetite, and their Mechanical and other Conditions must be suited to the digestive powers of the stomach.

In addition to these characters, every complete diet must contain some potash-vegetable or fruit; and the total amount of water taken in 24 hours, including that contained in the dry food, must not be less than 70 ozs. avoirdupois.

* As all the carbon needed for the renovation of the tissues is contained in the albuminoids or proteinaceous compounds (plastic), whose transformation into tissues constitutes the nutrition of animals, after ascertaining that a sufficient quantity of plastic material is supplied by the nitrogenous constituents of the food, we have only further to provide the *additional* quantity of carbon which is required to support the function of respiration, and afford, by its oxidation, the heat necessary to maintain the proper temperature of the body. It is carbon for combustion only, then, to which reference is made, when estimating the quantity to be supplied by the non-nitrogenous, or heat-giving ingredients of food.

DIET TABLES.

The following Diet Tables have been constructed to show how the essentials of a normal diet may be secured, whether the diet be complicated and expensive or simple and cheap. Each table has been made complete in itself, as an allowance of food for twenty-four hours, the totals of the corresponding columns of the analyses being about the same in all the Tables. Other combinations to afford any variety required may be arranged after these models from the materials given in the PER CENTAGE ANALYSIS TABLE, pages 32-34. With regard to alcohol, see Direction 4, p. 9.

In all cases, either some potash-vegetable or fruit, or lime-juice, must be taken occasionally, and salt as taste indicates.

No. 1.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon ozs.
		Meat, Poultry, or Game					
	6	(cooked) . . .	3·97	1·35	·53	...	·42
	4	Fish	3·19	·66	·03	...	·02
	10	Bread	4·20	1·00	·07	4·53	1·93
	8	Potatoes . . .	5·81	·14	...	1·84	·76
	2	Rice	·18	·10	·01	1·63	·73
	2½	Sugar	...	...	...	2·50	1·05
	2½	Butter . . .	...	...	2·50	...	1·85
5		Milk	4·34	·25	·17	·21	·22
16		Coffee	15·77	...	...	·22	·10
16		Tea	15·95	...	...	·05	·02
17		Water	17·	—	—	—	—
54	35		70·41	3·50	3·31	10·98	7·10
						In Plastic matter . .	1·89
						Total . .	8·99

No. 2.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	8	Meat, Poultry, or Game (cooked) . . .	5·29	1·80	·71	...	·56
	12	Bread . . .	5·04	1·20	·08	5·44	2·32
	12	Potatoes . . .	8·71	·20	...	2·76	1·14
	2	Butter . . .	...	...	2·00	...	1·48
	2	Sugar . . .	...	...	...	2.00	·84
5		Milk . . .	4·34	·25	·18	·21	·23
16		Chocolate . . .	15·20	·07	·32	·38	·42
16		Tea . . .	15·95	...	...	·05	·02
16		Water . . .	16·00	—	—	—	—
53	36		70·53	3·52	3·29	10·84	7·01
						In Plastic matter . .	1·90
						Total . .	8·91

No. 3.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	18	Bread	7·56	1·80	·12	8·15	3·47
	3½	Cheese . . .	1·28	1·07	·89	·08	·70
	3	Bacon	·76	·25	1·88	...	1·48
	1½	Sugar	...	...	...	1·50	·63
5		Milk	4·33	·25	·17	·21	·22
20		Chocolate . . .	19·00	·10	·40	·50	·50
20		Tea	19·93	...	...	·07	·04
20		Water, . . .	20·00	—	—	—	—
65	26		72·86	3·47	3·46	10·51	7·04
						In Plastic matter . .	1·87
						Total . .	8·91

No. 4.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	8	Fish	6·38	1 33	·06	...	·05
	16	Bread	6·72	1·60	·11	7·25	3·09
	8	Potatoes . . .	5·81	·14	...	1·84	·76
	$2\frac{1}{2}$	Butter . . .	...	...	2·50	...	1·85
10		Milk	6·93	·40	·28	·34	·36
20		Cocoa	19.10	·10	·60	·20	·56
	$1\frac{1}{2}$	Sugar	...	...	...	1·50	·63
25		Water	25·00	—	—	—	—
55	36		69·94	3·57	3·55	11·13	7·30
					In Plastic matter . .		1·93
					Total . .		9·23

No. 5.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat, ozs.	Saccharine. ozs.	Carbon. ozs.
	16	Bread	6·72	1·60	·11	7·25	3·09
	3	Peas	·41	·65	·04	1·40	·65
	4	Bacon . . .	1·14	·33	2·50	...	1·98
	2	Cheese . . .	·73	·61	·51	·05	·40
8		Milk	6·94	·40	·28	·34	·36
20		Coffee	19·71	...	...	·28	·13
	1	Sugar	...	...	...	1·00	·42
35		Water	35·00	—	—	—	—
63	26		70·65	3·59	3·44	10·32	7·03
					In Plastic matter . .		1·94
					Total . .		8·97

No. 6.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
40		Milk	34·68	2·00	1·40	1·68	1·80
	4	Rice	·36	·20	·02	3·26	1·46
	3	Eggs (two) . . .	2·15	·45	·32	...	·26
	2½	Sugar	...	...	...	2·50	1·05
	1	Butter	...	...	1·00	...	·74
	9	Bread	3·78	·90	·06	4·08	1·74
30		Water . . .	30·00	—	—	—	—
70	19½		70·97	3·55	2·80	11·52	7·05
					In Plastic matter . .		1·92
					Total . .		8·97

No. 7.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	20	Bread	8·40	2·00	·14	9·06	3·86
	3	Eggs (two) . . .	·21	·44	·32	...	·26
	1½	Butter	...	...	1·50	...	1·11
20		Milk	17·34	1·00	·70	·84	·90
20		Cocoa	19·10	·10	·60	·20	·56
	¾	Sugar	...	...	...	·75	·31
25		Water	25·00	—	—	—	—
65	25¼		70·05	3·54	3·26	10·85	7·00
					In Plastic matter . .		1·91
					Total . .		8·91

No. 8.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	8	Rice	·72	·40	·03	6·54	2·93
	7½	Eggs (five) . . .	5·40	1·11	·80	...	·65
	2½	Sugar	...	...	...	2·50	1·05
	1¼	Butter	...	...	1·25	...	·92
40		Milk	34·68	2·00	1·40	1·68	1·80
30		Water	30·00	—	—	—	—
70	19¼		70·80	3·51	3·48	10·72	7·35
					In Plastic matter . .		1·89
					Total . .		9·24

No. 9.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	9	Flour	1·13	1·28	·09	6·28	2·82
	1¾	Suet	...	...	1·75	...	1·38
	3	Sugar	...	...	...	3·00	1·26
	6	Eggs (four) . . .	4·32	·88	·64	...	·52
27		Milk	23·41	1·35	·94	1·13	1·21
42		Water	42·00	—	—	—	—
69	19¾		70·86	3·51	3·42	10·41	7·19
					In Plastic matter . .		1·89
					Total . .		9·08

No. 10.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon ozs.
	16	Oatmeal . . .	2·14	2·40	·93	8·51	4·46
22		Milk	19·07	1·10	·77	·90	·99
	1¾	Butter	...	...	1·75	...	1·30
	¾	Sugar	...	...	...	·75	·32
49		Water	49·00	—	—	—	—
71	18½		70·21	3·50	3·45	10·16	7·07
					In Plastic matter . .		1·89
					Total . .		8·96

No. 11.

Liquid. fluid ozs.	Dry. ozs.	Food for 24 hours.	Water. ozs.	Plastic. ozs.	Fat. ozs.	Saccharine. ozs.	Carbon. ozs.
	25	Bread	10·50	2·50	·17	11·33	4·82
	3¼	Cheese	1·18	1·00	·83	·08	·65
	2	Butter	...	...	2·00	...	1·48
60		Water	60·00	—	—	—	—
60	30¼		71·68	3·50	3·00	11·41	6·95
					In Plastic matter . .		1·89
					Total . .		8·84

PER-CENTAGE TABLE

Shewing the Approximate Composition of various Articles of Food.

See Note, p. 7.

The three middle columns (Mineral, Complement, Water), with either the four preceding columns (Proximate principles), or with the four following columns (Organic elements), make together 100 parts.

Food.	Plastic.	Fat.	Saccharine	Gelatine, Acid, &c.	Mineral.	Complement	Water	N.	H.	O.	C.	C. from Plastic.	C. from Respiratory.
Almonds	25·3	56·8	10·0	—	—	4·2	3·7	4·0	9·1	16·3	62·7	13·7	49·0
Apples	·2	—	13·6	·1	—	2·2	83·9	·03	·97	7·6	5·3	·1	5·2
Apricots	·6	—	19·0	1·4	—	1·6	77·4	·1	1·4	11·3	8·2	·3	7·9
Arrowroot	—	—	100·0	—	—	—	—	—	7·1	56.5	36·4	—	36·4
Artichoke	1·9	·1	18·8	—	1·8	·7	76·7	·3	1·4	10·3	8·8	1·0	7·8
Asparagus	·6	—	5·4	—	·4	—	93·6	·1	·4	2·9	2·6	·3	2·3
Bacon	8·4	62·5	—	—	·5	—	28·6	1·3	7·8	7·8	54·0	4·5	49·5
Barley Meal	12·3	1·8	71·4	—	2·5	3·0	9·0	1·9	5·6	38·7	39·3	6·7	32·6
Beans	20·2	·7	42·6	—	2·5	15·4	18·6	3·2	4·4	25·9	30·0	10·9	19·1
Beef	19·0	14·0	—	—	2·0	—	65·0	3·0	3·0	5·7	21·3	10·2	11·1
„ cooked	21·8	8·8	—	—	2·4	—	67·0	3·5	2·5	5·9	18·7	11·7	7·0
„ shin	17·0	·5	—	19·0	1·5	—	62·0	7·5	2·6	7·3	19·1	9·2	9·9
Beef-tea	3·1	—	—	—	2·5	—	94·4	·5	·2	·7	1·7	1·7	—
Bones	—	1·3	—	29·4	·6	68·7	—	5·2	2·2	7·5	15·8	—	15·8
Bread	10·0	·7	45·3	—	1·0	1·0	42·0	1·6	3·8	25·9	24·7	5·4	19·3
Broth	·5	—	—	1·5	1·0	—	97·0	·46	·14	·4	1·0	·3	·7
Butter	—	100·0	—	—	—	—	—	—	11·9	14·1	74·0	—	74·0
Butter-milk	3·7	—	—	—	—	—	96·3	·6	.3	·8	2·0	2·0	—
Cabbage	1·2	·1	6·2	—	·7	—	91·8	·2	·5	3·5	3·3	·6	2·7
Carp	18·4	·8	—	—	2·9	—	77·9	2·9	1·4	4·4	10·5	9·9	·6
Carrots	1·1	·3	11·9	—	·7	3·2	82·8	·2	·9	6·4	5·8	·6	5·2
Cauliflower	·1	—	8·1	—	—	1·8	90·0	·02	·58	4·2	3·4	·05	3·35
Cheese	30·8	25·6	2·4	—	4·7	—	36·5	4.9	5·4	11·9	36·6	16·6	20·0
Cherries	·6	—	21·4	2·0	·1	1·1	74·8	·1	1·7	12·9	9·3	·3	9·0
Chesnuts	2·8	—	41·1	—	1·9	—	54·2	·4	3·0	22·0	18·5	1·5	17·0
Chicken	21·6	1·9	—	—	2·8	—	73·7	3·5	1·7	5 2	13·1	11·6	1·5
Chocolate	8·8	38·8	49·2	—	1·8	1·4	—	1·4	8·3	30·7	56·4	4·8	51·6
„ (liquor)	·44	2·0	2·4	—	·09	·07	95·0	·07	·43	1·54	2·8	·2	2·6
Cocoa seeds	16·7	53·1	18·7	—	—	6·3	5·2	2·7	8·5	18·2	59·1	9·1	50·0
„ nibs	13·3	58·8	23·1	—	2·7	2·1	—	2·13	9·3	20·57	63·2	7·2	56·0
„ (liquor)	·5	3·0	1·0	—	—	—	95·5	·08	·4	·92	3·1	·3	2·8
Cod	16·5	·6	—	—	2·5	—	80·4	2·6	1·3	4·0	9·2	8·0	·4

Cream	3·5	4·5	—	—	—	—	92.0	·56	·8	1·24	5·4	1·9	3·5
Cucumber (peeled)	·1	—	1·7	—	·5	·6	97·1	·02	·12	·91	·75	·05	·7
Currants	·9	—	6·8	2·7	·3	8·0	81·3	·1	·6	5·5	4·2	·5	3·7
Dates, flesh	—	·3	73·4	—	—	2·3	24·0	—	4·9	40·3	28·5	—	28·5
„ kernel	·6	·8	38·9	7·1	—	39·6	13·0	·1	3.3	24·1	19·9	·3	19·6
Egg	15·0	10·8	—	—	2·5	—	71·7	2·4	2·3	4·5	16·6	8·1	8·5
„ white	13·9	—	—	—	2·8	—	83·3	2·2	1·0	3·2	7·5	7·5	—
„ yolk	16·9	29·8	—	—	2·0	—	51·3	2·7	4·7	6·7	32·6	9·1	23·5
Figs	5·0	·9	57·0	—	3·4	15·0	18·7	·8	4·2	30·9	27·0	2·7	24·3
Fish	16·6	·8	—	—	2·9	—	79·7	2·7	1·2	3·9	9·6	9·0	0·6
Flour (wheat)	14·2	1·0	69·8	—	1·2	1·3	12·5	2·2	5·5	38·3	39·0	7·7	31·3
Gooseberries, ripe	·9	—	7·0	2·7	·3	8·0	81·1	·14	·6	5·66	4·2	·5	3·7
„ unripe	1·1	—	1·9	1·9	·2	8·5	86·4	·18	·32	2·3	2·1	·6	1·5
Greengages	·3	—	26·8	·6	—	1·2	71·1	·05	1·85	15·2	10·6	·2	10·4
Green Vegetables	1·0	·2	7·8	—	·7	·8	89·5	·16	·6	4·34	3·9	·5	3·4
Groats, dry	4·0	1·2	74·2	—	—	7·6	13·0	·6	5·2	37·7	35·9	2·2	33·7
„ as gruel	4·0	—	59·0	—	—	24·0	13·0	·6	4·1	30·1	28·2	2·2	26·0
Gruel (groats)	·4	—	5·9	—	—	—	93·7	·06	·44	3·1	2·7	·2	2·5
„ (oatmeal)	1·1	·4	4·0	—	·3	·7	93·5	·2	·4	2.3	2·6	·6	2·0
Haddock	14·6	·6	—	—	2·6	—	82·2	2·4	1·1	3·4	8·3	7·9	·4
Ham	35·0	32·0	—	—	4·4	—	28·6	5·6	6·2	11·0	44·2	18·9	25·3
Horse-radish	·1	—	4·7	—	1·0	16·1	78·1	·02	·32	2·46	2·0	·05	1·95
Indian Corn Meal	8·1	4·5	70·0	—	·8	2·8	13·8	1·3	5·6	36·8	38·9	4·4	34·5
Kidney	21·2	·9	—	—	1·4	—	76·5	3·4	1·6	4·9	12·2	11·5	·7
Lamb	19·6	14·3	—	—	2·2	—	63·9	3·1	3·0	5·9	21·9	10·6	11·3
Lard	—	100·0	—	—	—	—	—	—	11·1	9·8	79·1	—	79·1
Lentil	29·7	—	39·2	—	1·4	15·2	14·5	4·8	4·6	26·4	33·1	16·0	17·1
Liver	26·3	3·9	—	—	1·2	—	68·6	4·2	2·3	6·4	17·3	14·2	3·1
Meat (butchers)	19·4	14·2	—	—	2·1	—	64·3	3·1	3·0	5·8	21·7	10·5	11·2
„ (cooked)	22·5	8·9	—	—	2·5	—	66·1	3·6	2·6	6·0	19·2	12·2	7·0
„ (gravy)	15·0	3·7	—	13·3	1·4	7·0	59·6	5·8	2·4	6·1	17·7	8·1	9·6
Milk (new)	5·0	3·5	4·2	—	·6	—	86·7	·8	1·1	3·6	7·2	2·7	4·5
„ (skimmed)	2·8	—	3·5	—	·8	—	92·9	·45	·45	2·5	2·9	1·5	1·4
Mutton	21·0	14·3	—	—	2·0	—	62·7	3·4	3·1	6·2	22·6	11·3	11·3
„ (cooked)	24·9	8·8	—	—	2·5	—	63·8	4·0	2·7	6·6	20·4	13·4	7·0
„ (neck)	13·0	6·8	—	7·6	1·4	14·0	57·2	4·0	2·2	5·0	16·2	7·0	9·2

* See note to "Tea."

PER CENTAGE TABLE.—*continued.*

Food.	Plastic.	Fat.	Saccharine	Gelatine, Acid, &c.	Mineral.	Complement	Water.	N.	H.	O.	C.	C. from Plastic.	C. from Respiratory.
Oatmeal	15·0	5·8	53·2	—	3·0	9·6	13·4	2·4	5·0	30·6	36·0	8·1	27·9
Onions	·5	—	5·2	—	·5	—	93·8	·08	·38	2·84	2·4	·3	2·1
Oysters	12·6	—	—	—	·2	—	87·2	2·0	·9	2·9	6·8	6·8	—
Parsnips	2·1	—	14·5	—	1·0	3·0	79·4	·3	1·1	8·0	7·2	1·1	6·1
Peaches	·2	—	21·2	1·8	—	1·9	74·9	·03	1·57	12·6	9·0	·1	8·9
Pearl Barley	4·7	—	78·0	—	·2	7·6	9·5	·8	5·4	39·9	36·6	2·5	34·1
Pears (ripe)	·1	—	9·6	·1	—	3·9	86·3	·02	·6	5·28	3·9	·05	3·85
Peas (dry)	21·9	1·5	46·9	—	2·7	13·3	13·7	3·5	4·8	28·5	33·5	11·8	21·7
„ (green)	2·7	—	6·6	—	·1	12·5	78·1	·4	·6	4·1	4·2	1·5	2·7
Pigeon	23·0	1·9	—	—	2·7	—	72·4	3·7	1·8	5·5	13·9	12·4	1·5
Pork (fresh)	17·5	16·0	—	—	2·2	—	64·3	2·8	3·1	5·5	22·1	9 4	12·7
Potatoes	1·4	·1	15·7	—	1·1	7·1	74·6	·2	1·1	8·1	7·8	·8	7·0
„ (peeled)	1·7	—	23·0	—	1·1	1·6	72·6	·3	1·6	12·4	10·4	·9	9·5
Prunes (flesh)	3·9	—	78·6	—	4·5	—	13·0	·6	5·6	41·7	34·6	2·1	32·5
Pudding (flour)	7·7	7·4	23·3	—	·9	·3	60·4	1·8	3·0	14·0	19·6	4·1	15·5
„ (rice)	5·4	5·4	16·3	—	·7	·4	71·8	·8	2·1	10·2	14·0	3·0	11·0
„ (suet)	7·1	13·0	34·9	—	·6	·6	43·8	1·14	4·3	20·96	28·6	3·8	24·8
Radishes	1·2	—	7·4	—	1·0	1·3	89·1	·2	·6	4·1	3·7	·6	3·1
Rice	5·1	·4	81·7	—	·5	3·3	9·0	·8	5·8	41·4	39·2	2·7	36·5
Rump-steak	21·7	1·9	—	—	2·4	—	74·0	3·5	1·7	5·2	13·2	11·7	1·5
Rye-flour	12·1	2·9	69·6	—	2·6	1·8	11·0	1·9	5·7	37·7	39·3	6·6	32·7
Sole	17·0	·8	—	—	2·5	—	79·7	2·7	1·3	4·0	9·8	9·2	·6
Suet	—	100·0	—	—	—	—	—	—	11·7	9·3	79·0	—	79·0
Sugar (crystalized)	—	—	90·0	—	—	—	10·0	—	5·3	42·3	42·4	—	42·4
Soup (invalid)	4·3	—	2·9	14·1	1·2	—	77·5	3·2	1·5	6·0	10·6	2·3	8·3
Sweetbread	28·0	·4	—	—	1·6	—	70·0	4·5	2·0	6·5	15·4	15·1	·3
Tea (leaf)	4·6	1·7	28·9	26·7	1·7	36·4	—	·74	3·5	27·96	29·7	2·5	27·2
„ (sol. etc.)	·5	—	19·0	22·5	1·0	57·0	—	·14	2·2	19·7	20·0	—	20·0
„ (infus.)*	·007	—	·32	—	·02	—	99·66	·001	·02	·16	·14	—	·14
Treacle	—	—	75·0	—	—	—	25·0	—	4·7	37·0	33·3	—	33·3
Trout	16·6	·8	—	—	4·3	—	78·3	2·7	1·2	3·9	9·6	9·0	·6
Turnips	1·2	·2	7·6	—	1·0	—	90·0	·2	·6	4·2	4·0	·6	3·4
Veal	17·7	14·3	—	—	2·3	—	65·7	2·8	3·0	5·4	20·8	9·5	11·3
Vegetable Marrow	·5	—	6·4	—	3·9	—	89·2	·08	·42	3·5	2·9	·3	2·6
Venison	20·4	8·0	—	—	2·8	—	68·8	3 3	2·4	5·4	17·3	11·0	6·3
Vermicelli	47 5	—	38·8	—	1·2	—	12·5	7·5	6·0	29·7	43·1	25·9	17·2

RECIPES.

(For Analyses, see Table pp. 32-34).

BEEF-TEA.

Beef (rump steak, minced) 1 lb., cold water 1 lb., macerate two hours at a temperature not exceeding 150° Fahrenheit, to yield 1 pint of beef-tea.

MUTTON BROTH.

Neck of mutton (fat removed, as far as possible), 1 lb., cold water 2 pints; gently boil six hours to yield 1 pint of broth, from which all fat is to be removed on cooling.

INVALID SOUP.

Gravy beef 1 lb., scragg of mutton 1 lb., isinglass 2 oz., vermicelli 3 ozs., mushroom ketchup 3 tablespoonfuls, corns of allspice 24, sage a sprig, cold water 3 quarts; put the isinglass and the meat cut small into the cold water, gradually boil, skim well, and then add the other ingredients; simmer four or five hours till reduced to 1 quart; strain through a fine hair sieve, and carefully remove all fat; add salt to the taste. This may be taken cold as a jelly, or warm as a soup.

PORRIDGE.

Oatmeal 2 oz., water 1 pint. Put the water into a stewpan, and as it boils dredge in the oatmeal with one hand, and with the other stir with a spoon; turn out into a soup-plate, add salt or sugar according to taste, and pour over it $\frac{1}{2}$ a pint of cold milk. Eat it with a spoon, mixing the milk and oatmeal together little by little.

FLOUR PUDDING.

Flour 4 ozs., sugar $1\frac{1}{4}$ oz., suet $\frac{3}{4}$ oz., milk $\frac{3}{4}$ pint, 1 egg. A combination of alimentary principles in nearly exact normal proportions.

RICE PUDDING.

Rice 3 ozs., sugar 1 oz., 2 eggs, butter ½ oz., milk 15 ozs., water as much as is sufficient. A combination of alimentary principles in nearly exact normal proportions.

SUET PUDDING.

Flour 1 lb., suet ¼ lb., water 13 ozs. These quantities, when boiled, yield 2 lbs. of pudding = 32 ozs.

SUET AND MILK.

Put a tablespoonful of shredded beef-suet into ½ pint of fresh milk; warm it sufficiently to completely melt the suet, then skim it; pour it into a *warm* glass or cup, and drink it before it cools.

MILK, WITH RUM, BRANDY, OR WHISKY.

Put 1 tablespoonful of rum, brandy, or whisky into half a pint of new milk, and mix well, by pouring several times from one vessel to another. Bilious persons should heat the *rum*, in a spoon over a lamp, before adding it to the milk.

PORT WINE JELLY.

Take of port wine 1 pint, isinglass 1 oz., sugar 1 oz.; put the isinglass and sugar into ¼ pint of water, warm till all is dissolved, then add the wine, strain through muslin and set to jelly.

TEA.

Tea ¼ oz., water 1 pint; stand 15 minutes, yields 18 ozs. tea. (See foot note p. 34).

COFFEE.

Ground coffee 1 oz., water 1 pint, by percolation, yields 16 ozs. coffee. (See foot note, p. 34).

CHOCOLATE AND COCOA.

1 oz. to each pint of water.

OPINIONS OF THE PRESS.

"In the matter of many of the prime necessaries of life—food and ventilation, for example—all society, even the most educated, is daily deeply sinning. May some of these sinners read Dr. Dobell's book, become wiser, and increase their days by living more after the laws of hygiene and common sense."—*British Medical Journal, April* 23, 1864.

"Our readers will be surprised to find within 36 pages an exposition of the hygienic questions relating to ventilation, heating, sleep, exercise, posture, bathing, regulation of the bowels, rest and change, meals, etc , etc., in addition to the all-important subject of diet . . . The rules seem to us very judicious . . . . The alcohol table is most ingenious . . . We report favourably of the idea which our author has broached, and of the manner in which he has brought it forward." —*Dublin Medical Press.*

"So much ignorance prevails about what is essential to health that a medical man is quite justified in assuming that so-called educated people require to be told what they do, in the stupidity of their minds, for the direct injury of their bodies. To these, Dr. Dobell's manual will be useful, and they should study it."—*Globe, April*, 1864.

"Dr. Dobell's book is the condensation and utilization, in a plain and practical form, of a vast amount of medical and chemical science, skill, and experience. . . . . A most convenient and valuable aid to the medical man, as a record; an instructive book for his patients, and a remembrancer of the great principles which regulate the wholesome dieting of the healthy as well as the valetudinarian."—*Morning Advertiser, April* 28.

"The book before us is intended alike to simplify and lessen the labour of the physician, in giving the needful instructions in diet and regimen for the daily and special guidance of his patient, and to supply those important hygienic rules for the preservation of health of which no person should be ignorant. . . . . In bringing out this very useful and concise work, Dr. Dobell has undertaken to fill up a very important gap in scientific literature . . . . it shows how health may be sustained as well as restored, it commends itself with great force to all classes; and we recommend it most cordially, in the broadest acceptation of the word, to all readers."—*Social Science Review, May*, 1864.

"The subject of diet, simple as it may at first sight appear, is so closely complicated with conflicting physiological and chemical theories, that we feel a sense of gratitude to the author of this manual for the able manner in which he has grappled with the difficulties surrounding this question. . . . He states a belief that a want for such a manual has hitherto existed, and upon this point we cordially agree with him. . . . The requirement would long before now have been supplied had not the difficulties to which reference has been made deterred others from publishing. Dr. Dobell has, consequently, undertaken an onerous task. . . . In our opinion, the handy character of Dr. Dobell's work is one of its great recommendations. We do not find that writers on Therapeutics hesitate to name the average quantity of a remedy to be taken at a dose; why, then, need there be any hesitation in attempting to define the amount or quality of food, and the kind of wine and other beverages which are best suited for invalids suffering from particular ailments."—*Medical Mirror, May*, 1864.

BY THE SAME AUTHOR.

DEMONSTRATIONS OF DISEASES IN THE CHEST, AND their Physical Diagnosis, containing a Treatise on the Acoustics of Auscultation and Percussion—Directions for Educating the Ear, by experiments on inanimate bodies—Instructions for Practice at the Bedside—and coloured Plates of the following Pathological conditions. Each plate accompanied by a concise Statement of the Physical Signs to be observed during Life, and followed by a corollary upon its leading points.

CONSOLIDATIONS.—

1. Isolated (miliary) interstitial tuberculous granulations.
2. Conglomerated interstitial tuberculous granulations.
3. Infiltrated tubercle.
4. Apoplexy of the lung after coagulation.
5. Healed cavities, fibro-cellular cicatrices, and chalky concretions.
6. First stage of pneumonia.
7. Second stage of pneumonia.
8. Second stage of pneumonia passing into the third.
9. Medullary cancer.
10. Hard cancer.
11. Melanoid cancer.
12. Indurated lung, the effect of pneumonia.

LIQUEFACTIONS.—

13. Second stage of acute bronchitis.
14. Chronic bronchitis.
15. Third stage of pneumonia.
16. Second stage of tuberculous disease.
17. Apoplectic coagula in the lung, softening.
18. Apoplexy of the lung before coagulation, with and without laceration.

EXCAVATIONS.—

19. A large empty tuberculous cavity, with reflecting walls, free bronchial communication, and consolidated surrounding lung.
20. A similar cavity containing secretion.
21. A very superficial cavity, full of air.
22. Small tuberculous cavities, beneath a stratum of normal lung.
23. A large tuberculous cavity, beneath a thick stratum of densely-consolidated lung.
24. Emphysema (vesicular).
25. Bronchiectasis.
26. A gangrenous cavity.
27. A pneumonic abscess, partly emptied.

PLEURISY, PNEUMOTHORAX, ETC.—

28. Normal lung, showing the interior of the bronchial tubes.
29. First stage of acute bronchitis.
30. First stage of acute pleurisy.
31. Second stage of acute pleurisy.
32. Third stage of acute pleurisy, compressed and displaced lung.
33. Pneumothorax.
34. The pathological causes and effects of pneumothorax.
35. Emphysema and pneumothorax.

"We do not hesitate to say, that the student who, after the examination of a patient, refers to this book, will have a much greater facility in understanding the *rationale* of the phenomena, and of interpreting them correctly, than one who is satisfied with comparing what he hears to the description of sounds given in handbooks, or to some typical sound pointed out to him by his teacher. . . What the author gives is well done, and in the right direction."—*British and Foreign Med.-Chir. Rev.*, 1859.

"Notwithstanding the great number of treatises which have appeared upon the diagnosis of diseases in the chest, the present work will form a valuable addition to the existing literature on the subject. . . . The plates are taken from fresh specimens of disease, and are very well executed, the colouring of the engravings heightening their effect, and giving them all the appearance of reality."—*Medical Times and Gazette*, 1859.

"We advise the student to examine well these plates, and read carefully the corollaries which accompany them. They will probably refresh his memory of what he has seen in necropsies, in the same way as anatomical plates call to his mind what he has seen in the dissecting room. The practitioner, too, may, by their means, from time to time refresh his knowledge of the pathological appearances of the lungs. And both will be materially aided in their appreciation of the connexion between physical signs and structural changes."—*British Medical Journal*, 1859.

"By comparing diseased conditions, and presenting them to the eye, with a description of the physical signs, the author has done much to make that evident, which no amount of mere verbal description could have done. . . . This work cannot fail to be of use to the student and young practitioner."—*Athenæum, April 23rd*, 1859.

"Dr. Dobell gives us ten coloured plates of considerable artistic excellence, exhibiting thirty-five distinct specimens of lung and pleural disease, and, facing each plate, so that the eye can at once turn from the one to the other, the concise statement of the physical signs connected with each specimen. What is done, is well done. There is every facility for learning the lesson given."—*Half-yearly Abstract of the Medical Sciences*, 1860.

LECTURES ON THE GERMS AND VESTIGES OF DISEASE, and on the Prevention of the Invasion and Fatality of Disease by Periodical Examination. Delivered at the Royal Infirmary for Diseases of the Chest. Price 6*s*.

"A book that the thoughtful student of pathology and therapeutics will ponder over with much satisfaction and profit. Dr. DOBELL is one of those practitioners who have not only had a scientific education, but are endowed with a philosophical insight. He wanted not only to know the causes of diseases, but why they varied, and why they came at all? How it is that one man in fifty is smitten with a fever? and of those smitten, that only one in five dies? These are the questions that agitate the profounder student of pathology, and to which the superficial practitioner never gives a thought. We think Dr. Dobell's practical suggestion of a periodical examination of the state of health of individuals a good one."—*Athenæum*, *Jan. 4th*, 1862.

"The author who takes for his subject the nature or cause of disease, ascends to the highest point to which induction is able to bear him. In order to arrive at this position, the various forms of disease must have been carefully studied and their relations considered. . . . There is a novelty in the style of Dr. DOBELL'S work which immediately excites interest and commands attention. Earnest in his endeavours to elucidate the truth, he has evidently spared neither time nor trouble in the consideration of his most intricate subject. . . His object seems to be to show the relation which subsists between morbid conditions and the inherent vital force, as well as the influence which inherited, for previously acquired, disease exerts in determining the result, when the body is exposed to morbific causes. . . . A train of argument is carried on steadily from page to page. . . The work abounds with evidences of deep thought." —*London Medical Review*, *February*, 1862.

"The author of this work is one of the few physicians in practical England who occupy themselves with medical philosophy. . . He points out that the life of an animal depends upon a continual accumulation of fresh matter and of fresh force. A certain part of the force which manifests itself in the processes of life is transmitted to the germs of a new generation and secures the multiplication of the species. . . The principal causes of change in the force are, the 'conditions of life,' 'coetaneous diseases,' and the 'vestiges of disease.' . . Such vestiges of disease become 'causes of fatality' in other diseases; . . the fatality, in most cases, is not to be ascribed to the malady itself, but to the vestiges of some pre-existent disease. . . Abnormal physiological conditions manifest themselves by disturbances in the general condition of the health. . . As it is easiest to recover the health in this obscure stage of the germination of disease . . . the author recommends periodical examinations of the state of health by competent medical men. . . Undoubtedly, such examinations, and advice based upon them, would be of great advantage."—*Allgemeine Medicinische Central-Zeitung*, Berlin, *September*, 1862.